

## CLAIMS

1. A data managing method for management of data, including extraction of recorded data, in accordance with a request from a user, wherein

said method uses data handling means which handles said recorded data and data managing means which is connected with said data handling means and manages the recording states of said recorded data,

said data handling means passes said data managing means with recording location information which is indicative of the recording locations of said recorded data, and

said data managing means saves the passed recording location information, retrieves the recording location of requested data from the saved recording location information in response to a request from a user, and extracts data through said data handling means based on the retrieved recording location.

2. A data managing system, comprising:

a client unit which a user uses to request for data;

an agent unit which saves encrypted document data and attributes information;

a document managing unit which executes user authentication, access control and document image edition by means of decrypting of encrypted document data; wherein

each said unit has a processing function and an interface function

which are independent of each other, and are connected via a communication network.

3. The data managing system as set forth in Claim 2, wherein said client unit and the agent unit which saves document data used by a user of said client unit are housed in a user terminal, and said document managing unit is disposed at a different location which is on-line connected.

4. The data managing system as set forth in Claim 2, wherein when document data have an output image in which a plurality of lines of particulars data are described between a predetermined page header and page footer,

a necessary multi-layer hierarchical index file is constructed which contains a lowest-order index file formed by said page header, said page footer and storing location data of said particulars data, a higher-order index file formed by index keys, index items and said storing location data of said lowest-order index file by blocking said lowest-order index file, and a further higher-order index file formed by blocking said upper index file, and

in response to a data request from said client unit, lower-order index files are sequentially specified from said higher-order index file by means of transactions between said client unit and said document managing unit, whereby data requested by a user are specified and provided.

5. A data managing system which comprises a data handling

mechanism for handling recorded data, a terminal mechanism for requesting for outputting of data recorded in said data handling mechanism, a data managing mechanism being connected with said data handling mechanism and for managing the recording states of said recorded data, and manages said data recorded in said data handling mechanism, wherein

said data handling mechanism comprises means for transmitting to said data managing mechanism recording location information indicative of the recording locations of said recorded data, and

said data managing mechanism comprises:

means for saving the received recording location information;

means for retrieving the recording location of requested data from the saved recording location information in response to a request from said terminal mechanism;

means for extracting data through said data handling mechanism based on the retrieved recording location;

means for converting the extracted data into a predetermined format set in advance; and

means for transmitting to said terminal mechanism said data converted into said predetermined format.

6. The data managing system as set forth in Claim 5, wherein said data managing mechanism further comprises:

means for authenticating said terminal mechanism; and

means for restricting processing on said data handling mechanism

based on an authentication result.

7. The data managing system as set forth in Claim 5, wherein  
said data are encrypted, and  
said data managing mechanism further comprises means for  
decrypting encrypted data.

8. The data managing system as set forth in Claim 7, wherein  
said data managing mechanism further comprises:  
means for authenticating said terminal mechanism; and  
means for restricting processing on said data handling mechanism  
based on an authentication result.

9. A data managing system which comprises a terminal  
mechanism for outputting data of an image format and a data managing  
mechanism for supporting management of data by said terminal  
mechanism, and manages data recorded in said terminal mechanism,  
wherein

said terminal mechanism comprises means for transmitting to said  
data managing mechanism recorded data and format information  
indicative of an image format at outputting of said data; and

said data managing mechanism comprises:

means for converting received data into an image format

expressed by the received format information; and

means for transmitting said data converted into the image

format to said terminal mechanism.

10. The data managing system as set forth in Claim 9, wherein said data are encrypted, and said data managing mechanism further comprises means for decrypting encrypted data.

11. The data managing system as set forth in Claim 10, wherein said data managing mechanism further comprises:  
means for authenticating said terminal mechanism; and  
means for restricting processing on said data handling mechanism based on an authentication result.

12. A data managing apparatus which manages the recording states of recorded data, comprising:  
means for receiving recording location information indicative of the recording locations of said recorded data;  
means for saving the received recording location information;  
means for retrieving the recording location of requested data from the saved recording location information when data output is requested;  
means for extracting data based on the searched recording location;  
and  
means for converting extracted data into a predetermined format set in advance.

13. A data handling apparatus which handles recorded data, comprising:

means for transmitting recording location information indicative of the recording locations of said recorded data to a data managing apparatus which manages the recording states of said recorded data; and

means for transmitting requested data when receiving from said data managing apparatus a data send request based on a recording location.

14. A computer program which causes a computer to manage the recording states of recorded data, comprising following procedures of:

when receiving recording location information indicative of the recording locations of said recorded data, causing a computer to save the received recording location information;

when being requested outputting of data, causing a computer to retrieve the recording location of requested data from the saved recording location information;

causing a computer to extract data based on the retrieved recording location; and

causing a computer to convert extracted data into a predetermined format set in advance.

15. A computer program which causes a computer to handle recorded data, comprising following procedures of:

causing a computer to transmit recording location information

indicative of the recording locations of said recorded data to a data managing apparatus which manages the recording states of said recorded data; and

when receiving a data send request based on a recording location, causing a computer to transmit requested data from a data apparatus.

16. A computer readable recording medium which records a computer program for causing a computer to manage the recording states of recorded data, comprising following procedures of:

when receiving recording location information indicative of the recording locations of said recorded data, causing a computer to save the received recording location information;

when being requested outputting of data, causing a computer to retrieve the recording location of requested data from the saved recording location information;

causing a computer to extract data based on the retrieved recording location; and

causing a computer to convert extracted data into a predetermined format set in advance.

17. A computer readable recording medium which records a computer program for causing a computer to handle recorded data, comprising:

program code means for causing a computer to transmit recording location information indicative of the recording locations of said recorded

program code means for, when a data send request based on a recording location is received, causing a computer to transmit requested data.